A PSEUDOSCORPION FROM GUATEMALA.

E. W. BERGER, Ph. D.

This Pseudoscorpion was collected by Professor James S. Hine just to the west of Gualan, Guatemala, January 15, 1905. The writer has identified the same as *Atemnus elongatus*, Bks. Mr. Banks sums up its (I, 1895) occurrence in the following lines: "Beaten from dead hickory wood in April near St. Lucie Riv., Indian River, Florida, by Mr. Hubbard; also at Sand Point and Enterprise, Fla., Punta Gorda, Fla., (Mrs. Slosson). A young specimen taken by myself at Runnemede, Fla., may belong to this species;" etc. To this should. of course, now be added Gualan, Guatemala. The chief interest to me of this find is, that it is another instance illustrating the extended north and south distribution of certain species of the Pseudoscorpionidae. In a previous paper (II) I made note of the fact that many species have a far north and south distribution, but not a very extensive one east and west. Thus none of the native eastern species were found to occur upon the Pacific Coast, and vice versa, while several of the species in the Eastern States are reported from Jamaica (II) to New York, and no doubt will be found farther north. For illustration I mention *Chelanops oblongus*, Say, and *Chthonius pennsylvanicus*, Hagen, each of which have the distribution mentioned.

The *Atemnus elongatus* was found to the east of the highlands of Guatemala, but whether it occurs to the west of these Professor Hine did not determine.

The specimens were collected from under the dead bark of an inclined tree, the under half of which was still alive. The animals were found in groups of a dozen, more or less, and apparently very much involved in some threads of silk, presumably of their spinning. This was also the condition of the preserved specimens. I was surprised at the manner in which these were tangled up into a bunch with threads of silk, until Professor Hine explained to me the condition in which he had found them. The significance of this condition I do not understand. It occurs to me that they may have been in some condition of rest for the season, which is dry at that period of the year. The animals, however, were not torpid and scattered when disturbed and this manner of congregating in groups may be nothing more than a regular habit. The fact, however, that several other species of larger arthropods were observed congregated into groups, literally by the hundred, seemingly in some condition of rest approximating hibernation, makes the belief, that the pseudoscorpions were in a similar condition, not

improbable. Among these other "arthropods" were hundreds of harvestmen collected together in shallow hollows beneath the overhanging banks of a small stream. These were arranged in close proximity to one another with their long legs bent upward, thus making a very peculiar appearance. There were several species of these, but each species was congregated by itself. Several species of Hesperidae were also observed to be collected in a similar manner, clinging close together, to overhanging hollows beneath the bank, each species for itself.

The characters of the *A. elongatus* from Guatemala tally very nicely with the description by Mr. Banks (I) and I deem it unnecessary to give any extensive description here, except to state that they measure three millimetres in length and are dark brown with the legs much lighter.

I tried to determine the sexes of the specimens collected (22 in number), but was not successful. I had concluded that the specimen figured was a male, but a study of sections made from this after having completed the drawing showed it to be a gravid fertilized female (Plate X). I counted from thirty-five to forty apparently well developed eggs in the ovary, and I estimated that a bunch of spermatozoa found in the oviduct, just inside the genital opening, consisted of not less than two hundred individuals, and there may have been twice that number. These facts clearly show that the female is fertilized prior to the laying of her eggs and that the spermatozoa may be retained by the female at least for some short time (if not for a longer time) before the eggs are fertilized and laid.

All the longer hairs upon the figure (Plate XXXI) are exactly as in nature. All hairs upon the dorsal scutae, the top of the cephalo-thorax (a few very small ones omitted), the edges of the cephalo-thorax and the mouth parts, or chelae, are exactly as in nature.

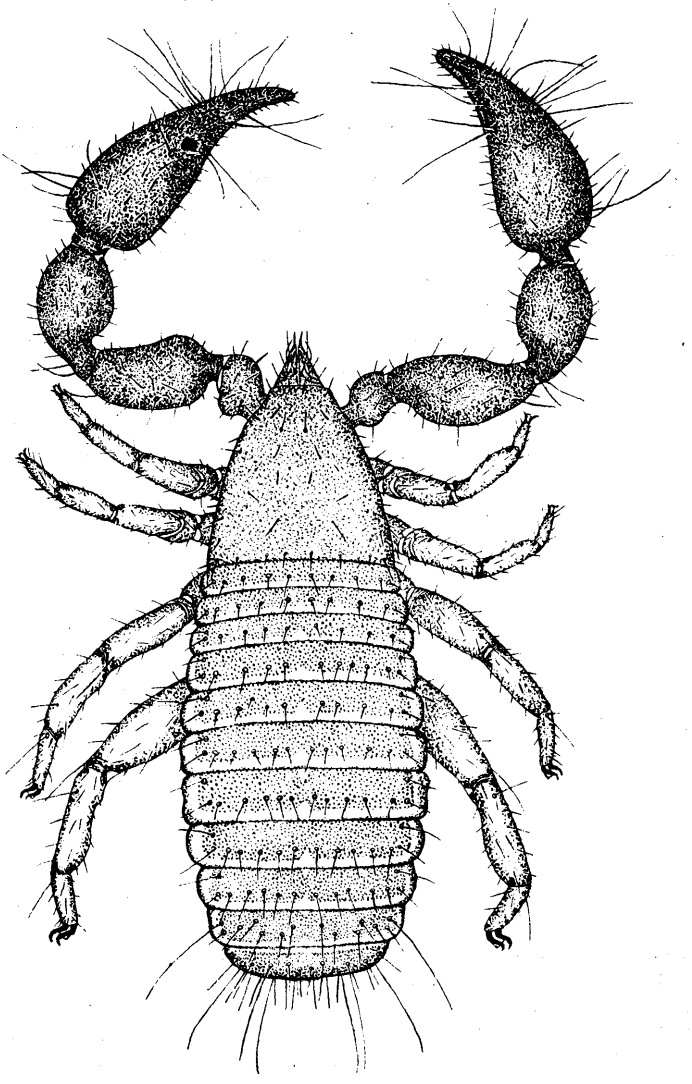
Specimens of pseudoscorpions will be gratefully received and exchanges made when possible.

Biological Hall, Ohio State University, Columbus, February 14, 1906.

LITERATURE.

I. Nathan Banks, 1895. Notes on the Pseudoscorpionidae. Journ. N. Y. Entom. Soc., Vol. 3, No. 1.

II. Berger, E. W. 1905. Habits and Distribution of the Pseudoscorpionidae, Principally Chelanops Oblongus, Say. The Ohio Naturalist, Vol. VI, No. 2. Contributions Dept. Zool. and Entom. Ohio State Univ., No. 23.



E. W. Berger, del.

Atemnus elongatus, Bks.